Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4658	(distribut$4 near architecture)	US-PGPUB; USPAT	OR	ON	2005/10/12 12:53
L2	140	(distribut$4 near architecture) with (input or output)	US-PGPUB; USPAT	OR	ON	2005/10/12 12:54
L3	1	(distribut$4 near architecture) with ((input or output) near2 application)	US-PGPUB; USPAT	OR	ON	2005/10/12 12:54
L4	1	(distribut$4 near architecture) with ((input or output) near3 application)	US-PGPUB; USPAT	OR	ON	2005/10/12 12:54
L6	37	(distribut$4 near architecture) with (process$4 adj application)	US-PGPUB; USPAT	OR	ON	2005/10/12 12:55
L7	36	6 not 3	US-PGPUB; USPAT	OR	ON	2005/10/12 12:57
L8	10308	determin$4 with evaluat$4 with time	US-PGPUB; USPAT	OR	ON	2005/10/12 12:59
L9	24	determin$4 with evaluat$4 with time with interaction	US-PGPUB; USPAT	OR	ON	2005/10/12 13:00
L10	23	9 not 3	US-PGPUB; USPAT	OR	ON	2005/10/12 12:59
L11	1	determin$4 with evaluat$4 with (time adj (information or data)) with interaction	US-PGPUB; USPAT	OR	ON	2005/10/12 13:01
L12	119	determin$4 with evaluat$4 with (time adj (information or data))	US-PGPUB; USPAT	OR	ON	2005/10/12 13:01
L13	118	12 not 11	US-PGPUB; USPAT	OR	ON	2005/10/12 13:01
L14	40	(determin$4 near3 evaluat$4) with (time adj (information or data))	US-PGPUB; USPAT	OR	ON	2005/10/12 13:01
L15	15	(determin$4 near3 evaluat$4) near3 (time adj (information or data))	US-PGPUB; USPAT	OR	ON	2005/10/12 13:02
L16	14	15 not 3	US-PGPUB; USPAT	OR	ON	2005/10/12 13:11
L17	58	(time adj (information or data)) near3 interaction	US-PGPUB; USPAT	OR	ON	2005/10/12 13:03
L18	1	evaluat$4 with (time adj (information or data)) near3 interaction	US-PGPUB; USPAT	OR	ON	2005/10/12 13:03
L19	1	determin$4 with (time adj (information or data)) near3 interaction	US-PGPUB; USPAT	OR	ON	2005/10/12 13:10
L20	57	17 not 3	US-PGPUB; USPAT	OR	ON	2005/10/12 13:03

L21	35	evaluat$4 adj (time adj (information or data))	US-PGPUB; USPAT	OR	ON	2005/10/12 13:10
L22	34	21 not 3	US-PGPUB; USPAT	OR	ON	2005/10/12 13:10
L23	29	22 not 16	US-PGPUB; USPAT	OR	ON	2005/10/12 13:11
L25	49	(("(4426587") or ("5742194") or ("6057728") or ("6411541") or ("4543649") or ("3890831") or ("4143136") or ("4554035") or ("4605652") or ("4778500") or ("4814623") or ("4914169") or ("5012010") or ("5068730") or ("5557715") or ("5674768") or ("6077227") or ("6110742") or ("6331500") or ("6708153") or ("6807529") or ("6912581") or ("6151568") or ("5748841") or ("5008795") or ("4453095") or ("4573767") or ("4760754") or ("4772860") or ("4976173") or ("6618060") or ("5640566") or ("5848424") or ("6109018") or ("6230184") or ("4501252") or ("6199614") or ("5819092") or ("5890152") or ("5982370") or ("6125385") or ("6161126") or ("5555369") or ("5884312") or ("5923736") or ("5956736") or ("6034689") or ("6097387") or ("6101509") or ("6112242").pn.")). PN.	US-PGPUB; USPAT	OR	OFF	2005/10/12 13:32
L26	19	25 and (meta$4)	US-PGPUB; USPAT	OR	ON	2005/10/12 13:32
L27	14	25 and html	US-PGPUB; USPAT	OR	ON	2005/10/12 13:33
L28	6	26 and 27	US-PGPUB; USPAT	OR	ON	2005/10/12 13:32
L29	12	25 and terminal	US-PGPUB; USPAT	OR	ON	2005/10/12 13:33
L30	5	29 and interact$4	US-PGPUB; USPAT	OR	ON	2005/10/12 13:34
L33	13564	(meta$4) with (multimodal or interaction)	US-PGPUB; USPAT	OR	ON	2005/10/12 13:35
L34	8	interpret$4 with (meta$4) with (multimodal or interaction)	US-PGPUB; USPAT	OR	ON	2005/10/12 13:35
S1	2269	(715/513).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/10/11 13:20
S3	1143	(715/501.1).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/10/11 15:09

S4	965	(715/530).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/10/11 15:14
S5	290	(715/760).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/10/12 12:53

Terms used
multimodal interaction meta tags mark up language

Found 36,335 of 164,603

Sort results by relevance

Display results expanded form

Save results to a Binder

Search Tips

Open results in a new window

Try an Advanced Search

Try this search in The ACM Guide

Results 1 - 20 of 200 Result page: 1 2 3 4 5 6 7 8 9 10 next

Best 200 shown

Relevance scale

1 Long papers: recommendation and instruction: Animating an interactive conversational character for an educational game system

Andrea Corradini, Manish Mehta, Niels-Ole Bernsen, Marcela Charfuelan

January 2005 **Proceedings of the 10th international conference on Intelligent user interfaces**

Full text available: pdf(281.80 KB) Additional Information: full citation, abstract, references, index terms

Within the framework of the project NICE (Natural Interactive Communication for Edutainment) [2], we have been developing an educational and entertaining computer game that allows children and teenagers to interact with a conversational character impersonating the fairy tale writer H.C. Andersen (HCA). The rationale behind our system is to make kids learn about HCA's life, fairy tales and historical period while playing and having fun. We report on the character's generation and realization of b ...

Keywords: edutainment, embodied conversational agent, multimodal output, user interface

2 Advancing interaction: Interacting with embodied agents in public environments

Addolorata Cavalluzzi, Berardina De Carolis, Sebastiano Pizzutilo, Giovanni Cozzolongo

May 2004 **Proceedings of the working conference on Advanced visual interfaces**

Full text available: pdf(257.35 KB) Additional Information: full citation, abstract, references, index terms

In this paper, we present the first results of a research aiming at developing an intelligent agent able to interact with users in public spaces through a touch screen or a personal device. The agent communication is adapted to the situation at both content and presentation levels, by generating an appropriate combination of verbal and non-verbal agent behaviours.

Keywords: interface agents, personalization

3 System papers: interface generation and annotation tools: A visual interface for a multimodal interactivity annotation tool: design issues and implementation solutions

Mykola Kolodnytsky, Niels Ole Bernsen, Laila Dybkjær

May 2004 **Proceedings of the working conference on Advanced visual interfaces**

Full text available: pdf(113.00 KB) Additional Information: full citation, abstract, references, index terms

This paper discusses the user interface design for the NITE WorkBench for Windows (NWB) which enables annotation and analysis of full natural interactive communicative behaviour between humans and between humans and systems. The system enables users to perceive voice and video data and control its presentation when performing multi-level, cross-level and cross-modality annotation, information visualisation for data coding and analysis, information retrieval, and data exploitation.

Keywords: data annotation tools, data visualisation, interface design

4 Web site engineering: Staging transformations for multimodal web interaction management

Michael Narayan, Christopher Williams, Saverio Perugini, Naren Ramakrishnan

May 2004 **Proceedings of the 13th international conference on World Wide Web**

Full text available: pdf(2.76 MB) Additional Information: full citation, abstract, references, citings, index terms

Multimodal interfaces are becoming increasingly ubiquitous with the advent of mobile devices, accessibility considerations, and novel software technologies that combine diverse interaction media. In addition to improving access and delivery capabilities, such interfaces enable flexible and personalized dialogs with websites, much like a conversation between humans. In this paper, we present a software framework for multimodal web interaction management that supports mixed-initiative dialogs betw ...

Keywords: mixed-initiative interaction, out-of-turn interaction, partial evaluation, program transformations, web dialogs

5 Creating tangible interfaces by augmenting physical objects with multimodal language

David R. McGee, Philip R. Cohen

January 2001 **Proceedings of the 6th international conference on Intelligent user interfaces**

Full text available: pdf(560.34 KB) Additional Information: full citation, abstract, references, citings, index terms

Rasa is a tangible augmented reality environment that digitally enhances the existing paper-based command and control capability in a military command post. By observing and understanding the users' speech, pen, and touch-based multimodal language, Rasa computationally augments the physical objects on a command post map, linking these items to digital representations of the same-for example, linking a paper map to the world and Post-itâ notes to military units. Herein, we give a thorough ac ...

Keywords: augmented reality, human factors, invisible interfaces, mixed reality, multimodal interfaces, tangible interfaces

6 Accepted Posters: Scripting embodied agents behaviour with CML: character markup language

Yasmine Arafa, Abe Mamdani

January 2003 **Proceedings of the 8th international conference on Intelligent user interfaces**

Full text available: pdf(678.22 KB) Additional Information: full citation, abstract, references

Embodied agents present ongoing challenging agenda for research in multi-modal user interfaces and human-computer-interaction. Such agent metaphors will only be widely

applicable to online applications when there is a standardised way to map underlying engines with the visual presentation of the agents. This paper delineates the functions and specifications of a mark-up language for scripting the animation of virtual characters. The language is called: Character Mark-up Language (CML) and is an ...

Keywords: CML, animated expression, automated animation scripting, embodied agents, interface agents, lifelike characters, mark-up languages

7 ISIS: an adaptive, trilingual conversational system with interleaving interaction and delegation dialogs

Helen Meng, P. C. Ching, Shuk Fong Chan, Yee Fong Wong, Cheong Chat Chan

September 2004 **ACM Transactions on Computer-Human Interaction (TOCHI)**, Volume 11 Issue 3

Full text available: pdf(3.71 MB) Additional Information: full citation, abstract, references, index terms

ISIS (Intelligent Speech for Information Systems) is a trilingual spoken dialog system (SDS) for the stocks domain. It handles two dialects of Chinese (Cantonese and Putonghua) as well as English---the predominant languages in our region. The system supports spoken language queries regarding stock market information and simulated personal portfolios. The conversational interface is augmented with a screen display that can capture mouse-clicks as well as textual input by typing or stylus-writing. ...

Keywords: Human-computer spoken language interface, interaction and delegation dialogs

8 Multimodal, multidevice and beyond: Tool-supported single authoring for device independence and multimodality

Rainer Simon, Florian Wegscheider, Konrad Tolar

September 2005 **Proceedings of the 7th international conference on Human computer interaction with mobile devices & services MobileHCI '05**

Full text available: pdf(1.13 MB) Additional Information: full citation, abstract, references, index terms

With the growing proliferation of mobile computing devices, the vision of the web anytime, anywhere and on any device is rapidly becoming a reality. Technologies enabling device-independent presentation and new interaction modalities like voice or gesture are moving from research to commercially available products. As a result, developers are faced with the increasing challenge of providing user interfaces that match the capabilities of the different devices available. Within this paper we prese ...

Keywords: device independence, mobile device, modality independence, multimodal interaction, single authoring, universal access, user interfaces, web authoring

9 Interactive Editing Systems: Part II

Norman Meyrowitz, Andries van Dam

September 1982 **ACM Computing Surveys (CSUR)**, Volume 14 Issue 3

Full text available: pdf(9.17 MB) Additional Information: full citation, references, citings, index terms

10 Session 3: Stylesheet transformations for interactive visualization: towards a Web3D chemistry curricula

Nicholas F. Polys

March 2003 **Proceeding of the eighth international conference on 3D Web technology**

Full text available: pdf(574.50 KB) Additional Information: full citation, abstract, references, citings, index terms

Recent Standards specifications offer important but underemployed techniques to maximize access-to and distribution-of information for real-time 3D visualization over the web. This paper describes and evaluates such techniques to transform structured data such as Chemical Markup Language (CML) to different forms and contexts for Web3D delivery using Extensible Stylesheet Transformations (XSLT), Extensible 3D (X3D), and VRML97. Standards design approaches offer a number of advantages: data durabi ...

Keywords: education, information visualization, interactive 3D graphics, molecular chemistry

11 Languages & Authoring for the Semnatic Web: Authoring and annotation of web pages in CREAM

Siegfried Handschuh, Steffen Staab

May 2002 **Proceedings of the 11th international conference on World Wide Web**

Full text available: pdf(764.65 KB) Additional Information: full citation, abstract, references, citings, index terms

Richly interlinked, machine-understandable data constitute the basis for the Semantic Web. We provide a framework, CREAM, that allows for creation of metadata. While the annotation mode of CREAM allows to create metadata for existing web pages, the authoring mode lets authors create metadata --- almost for free --- while putting together the content of a page.As a particularity of our framework, CREAM allows to create *relational metadata*, i.e. metadata that instantiate interrelated defini ...

Keywords: RDF, annotation, metadata, semanticWeb

12 Interactive Editing Systems: Part I

Norman Meyrowitz, Andries van Dam

September 1982 **ACM Computing Surveys (CSUR)**, Volume 14 Issue 3

Full text available: pdf(3.08 MB) Additional Information: full citation, citings, index terms

13 Posters: DomoML: the definition of a standard markup for interoperability of human home interactions

Francesco Furfari, Lorenzo Sommaruga, Claudia Soria, Roberto Fresco

November 2004 **Proceedings of the 2nd European Union symposium on Ambient intelligence EUSAI '04**

Full text available: pdf(326.40 KB) Additional Information: full citation, abstract, references

DomoML is a mark-up language aimed at the definition of interoperability standard for domestic resources within the NICHE project (Natural Interaction in Computerised Home Environment). The project focuses on human language as a means for mediating user interaction with the home environment, enabling a user to control, query and program devices. Various heterogeneous components are going to take part in this architecture, and DomoML is the glue which allows them to be interfaced. It is a mark ...

Keywords: ambient interfaces, human home interaction, interoperability, multimodal interaction, natural user-system interaction, software architectures, standard markup, system integration and prototyping

14 Session 4: Implementation of a scripting language for VRML/X3D-based embodied agents

Zhisheng Huang, Anton Eliëns, Cees Visser

March 2003 **Proceeding of the eighth international conference on 3D Web technology**

Full text available: pdf(1.02 MB) Additional Information: full citation, abstract, references, index terms

Embodied agents or humanoid avatars may effectively be used to communicate with human users. Currently there is a wide range of specification formalisms and scripting languages for embodied agents, many of which are of a somewhat ad hoc nature lacking clear semantics. In this paper, we discuss the implementation of a scripting language for humanoid avatars in VRML/X3D-based environments. The scripting language STEP is based on dynamic logic, which provides a clear semantics for complex behaviora ...

Keywords: STEP, VRML/X3D, XSTEP, agents, distributed logic Programming, h-anim

15 Interfaces: Authoring scenes for adaptive, interactive performances

Patrick Gebhard, Michael Kipp, Martin Klesen, Thomas Rist

July 2003 **Proceedings of the second international joint conference on Autonomous agents and multiagent systems**

Full text available: pdf(3.18 MB) Additional Information: full citation, abstract, references, index terms

In this paper, we introduce a toolkit called SceneMaker for authoring scenes for adaptive, interactive performances. These performances are based on automatically generated and pre-scripted scenes which can be authored with the SceneMaker in a two-step approach: In step one, the scene flow is defined using cascaded finite state machines. In a second step, the content of each scene must be provided. This can be done either manually by using a simple scripting language, or by integrating scenes wh ...

Keywords: authoring, believability, embodied agents, user adaptivity, virtual theater

16 A comprehensive approach for the development of modular software architecture description languages

Eric M. Dashofy, André van der Hoek, Richard N. Taylor

April 2005 **ACM Transactions on Software Engineering and Methodology (TOSEM)**, Volume 14 Issue 2

Full text available: pdf(3.51 MB) Additional Information: full citation, abstract, references, index terms

Research over the past decade has revealed that modeling software architecture at the level of components and connectors is useful in a growing variety of contexts. This has led to the development of a plethora of notations for representing software architectures, each focusing on different aspects of the systems being modeled. In general, these notations have been developed without regard to reuse or extension. This makes the effort in adapting an existing notation to a new purpose commensurate ...

Keywords: ArchStudio 3, Architecture description languages, XML, xADL 2.0

17 Agents, interactions, mobility, and systems (AIMS): Knowledge-based conversational agents and virtual storytelling

Paul Tarau, Elizabeth Figa

March 2004 **Proceedings of the 2004 ACM symposium on Applied computing**

Full text available: pdf(461.87 KB) Additional Information: full citation, abstract, references

We describe an architecture for building speech-enabled conversational agents, deployed as self-contained Web services, with ability to provide inference processing on very large

knowledge bases and its application to voice enabled chatbots in a virtual storytelling environment. The architecture integrates inference engines, natural language pattern matching components and story-specific information extraction from RDF/XML files. Our Web interface is dynamically generated by server side agents s ...

Keywords: FrameNet and Open Mind-based knowledge processing, WordNet, agent architectures, agentbased Web services, conversational agents, logic programming, natural language and speech processing, virtual storytelling

18 Markup systems and the future of scholarly text processing

James H. Coombs, Allen H. Renear, Steven J. DeRose
November 1987 **Communications of the ACM**, Volume 30 Issue 11

Full text available: pdf(1.91 MB) Additional Information: full citation, abstract, references, citings, index terms, review

Markup practices can affect the move toward systems that support scholars in the process of thinking and writing. Whereas procedural and presentational markup systems retard that movement, descriptive markup systems accelerate the pace by simplifying mechanical tasks and allowing the authors to focus their attention on the content.

19 Posters: XISL: a language for describing multimodal interaction scenarios

Kouichi Katsurada, Yusaku Nakamura, Hirobumi Yamada, Tsuneo Nitta
November 2003 **Proceedings of the 5th international conference on Multimodal interfaces**

Full text available: pdf(152.59 KB) Additional Information: full citation, abstract, references, index terms

This paper outlines the latest version of XISL (eXtensible Interaction Scenario Language). XISL is an XML-based markup language for web-based multimodal interaction systems. XISL enables to describe synchronization of multimodal inputs/outputs, dialog flow/transition, and some other descriptions required for multimodal interaction. XISL inherits these features from VoiceXML and SMIL. The original feature of XISL is that XISL has enough modality-extensibility. We present the basic XISL tags, outl ...

Keywords: XISL, XML, modality extensibility, multimodal interaction

20 Spoken dialogue technology: enabling the conversational user interface

Michael F. McTear
March 2002 **ACM Computing Surveys (CSUR)**, Volume 34 Issue 1

Full text available: pdf(987.69 KB) Additional Information: full citation, abstract, references, citings, index terms, review

Spoken dialogue systems allow users to interact with computer-based applications such as databases and expert systems by using natural spoken language. The origins of spoken dialogue systems can be traced back to Artificial Intelligence research in the 1950s concerned with developing conversational interfaces. However, it is only within the last decade or so, with major advances in speech technology, that large-scale working systems have been developed and, in some cases, introduced into commerc ...

Keywords: Dialogue management, human computer interaction, language generation, language understanding, speech recognition, speech synthesis